

FIELD OF THE INVENTION

The present invention relates to at least a weight sensing unit that is operatively secured beneath one or more seats and communicatively connected to a vehicle's supplemental restraint system

BACKGROUND OF THE INVENTION

Weight sensing systems for use with supplemental restraint devices are well known in the art. One such weight sensing system includes sensors positioned in the sitting surface of a seat. These sensors are engaged only when the seat cushion is deflected.

The present invention discloses a weight sensing unit that is secured beneath one or more seats in a vehicle, and which is communicatively connected to the vehicle's supplemental restraint system through a computerized system to enable controlling the deployment force and acceleration used to inflate airbags more intelligently, such that the corresponding weight of each seated occupant is measured by the weight sensing unit and a corresponding electrical signal is enabled so that the deployment force of the airbag is determined.

SUMMARY OF THE INVENTION

The present invention is a supplemental restraint system consisting of one or more weight sensing units, each operatively secured beneath one or more seats in a vehicle. The weight sensing unit is communicatively connected to the supplemental restraint system through a computerized system so that the deployment force and acceleration of an airbag

is intelligently controlled. The deployment force of the airbag is determined proportionately based on the weight of the occupant occupying the corresponding seat. The present invention further consists of the disclosure of weight and mass as equivalent for achieving proportionate deployment force and acceleration for the airbag. The weight sensing unit comprises a load cell secured beneath the seat. Each of the load cell is configured with one or more strain gages configured to sense at least a force applied to them when an occupant sits on the seat. These strain gages are designed to strain due to the force acting upon the surface of the seat, and generating electrical energy for communications. The supplemental restraint system comprises an airbag system connected to a deployment unit in communication with the computerized system. The computerized system consisting of at least one of: CPU, ROM, RAM, EPROM, and CONTROL MODULE.